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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,792	01/28/2004	Edwin C. Weldon	000894 USA C02/ISM/HDP/CV	7286

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EXAMINER	
DANG, ROBERT TRONG	
ART UNIT	**PAPER NUMBER**
2838	

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/767,792	WELDON ET AL.	
	Examiner	Art Unit	
	Robert T. Dang	2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

As applicant noted in his recent arguments, Weldon (6108189) is not prior art and is a parent application, so that this new action follows

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-10, 12-19, and 21-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe et al (5384682).

As to claim 1, Watanabe discloses in figure 2, an electrostatic chuck comprising: (a) a dielectric member comprising: (i) a first layer (1) comprising a semi-conductive material; and (ii) a second layer (2) over the first layer, the second layer comprising an insulative material. Watanabe at col. 3, lines 1-54 discloses the same materials as applicant, see page 30-31 of the specification, where the dielectric layer is doped with with, Al.sub.2O.3, AIN, and TiO.sub.2, and is therefore deemed semiconductive. Also, there is an (b) electrode in the dielectric member (see abstract) (see col. 2, lines 20-25).

As to claim 3, Watanabe discloses an electrostatic chuck (20) wherein the second layer comprises a resistivity of at least about (1.times.10.sup.11 .OMEGA.cm) (see table 4)

As to claim 4, Watanabe discloses an electrostatic chuck wherein the second layer comprises a resistivity of from about 1.times.10.sup.11 to about 1.times.10.sup.20 .OMEGA.cm (see table 4)

As to claims 5 and 14, Watanabe discloses an electrostatic chuck wherein the first layer comprises Al.sub.2O.sub.3. (see col. 3, lines 1-54)

As to claims 6 and 15, Watanabe discloses an electrostatic chuck wherein the first layer comprises TiO.sub.2. (see col. 3, lines 1-54)

As to claim 7, Watanabe discloses an electrostatic chuck wherein the first layer comprises AlN. (see col. 3, lines 1-54)

As to claims 8 and 16, Watanabe discloses an electrostatic chuck wherein the electrode is embedded in the first layer of the dielectric member (see col. 2, lines 20-25).

As to claim 9, Watanabe discloses an electrostatic chuck wherein the second layer comprises AlN. (see col. 3, lines 55-60)

As to claims 10 and 17-18, Watanabe discloses an electrostatic chuck wherein the second layer comprises SiO.sub.2 or ZrO.sub.2. (see col. 3, lines 55-60)

As to claim 12, Watanabe discloses an electrostatic chuck wherein the dielectric member is fabricated by sintering ceramic powders (see col. 3, lines 55-60)

As to claim 13, Watanabe discloses in figure 2, an electrostatic chuck comprising: (a) a dielectric member comprising: (i) a first layer comprising a semiconductive material; and (ii) a second layer over the first layer, the second layer comprising an insulative material (see col. 2, lines 20-25); and (b) an electrode in the dielectric member. The second layer comprising a resistivity of from about 1.times.10.sup.11 to about 1.times.10.sup.20 .OMEGA.cm (see table 4). The first layer comprising a resistivity of from about (5.times.10.sup.9 .OMEGA.cm) to about 8.times.10.sup.10 .OMEGA.cm was addressed in claim 2.

As to claim 19, Watanabe discloses in figure 2, an electrostatic chuck comprising: (a) a dielectric member comprising: (i) a first semiconductive layer where the second insulative layer having a resistivity higher than the first semiconductive layer, and (b) an electrode in the dielectric member; however he does not disclose the first semiconductive layer having a resistivity that is sufficiently low to provide (i) a charging time of less than about 3 seconds and (ii) allow accumulated electrostatic charge to substantially dissipate in less than about 1 second (see col. 1, lines 59-60). Since, Watanabe at col. 3, lines 1-54 discloses the same materials as applicant, see page 30-31 of the specification, where the dielectric layer is doped with with, Al.sub.2O.3, AIN, and TiO.sub.2, at the same time utilizing the same resistivity, the charging time should be at 3 seconds. The first layer is also deemed semiconductive.

As to claim 21, Watanabe discloses an electrostatic chuck (20) wherein the second layer comprises a resistivity of at least about (1.times.10.sup.11 .OMEGA.cm) (see table 4)

As to claim 22, Watanabe discloses an electrostatic chuck wherein the first layer comprises Al.sub.2O.sub.3. (see col. 3, lines 1-54).

As to claim 23, Watanabe discloses an electrostatic chuck wherein the electrode (80) is embedded in the first layer of the dielectric member (see col. 3, lines 1-54)

As to claims 24-25, Watanabe discloses an electrostatic chuck wherein the second layer comprises SiO.sub.2 or ZrO.sub.2. (see col. 3, lines 55-60).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2, 11, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al (5384682) in view of Donde et al (5729423)

As to claim 2, Watanabe discloses an electrostatic chuck, however he does not disclose wherein the first layer comprises a resistivity of from about (5.times.10.sup.9 .OMEGA.cm) to about 8.times.10.sup.10 .OMEGA.cm. Donde teaches in his invention wherein the first layer comprises a resistivity of from about (5.times.10.sup.9 .OMEGA.cm) to about 8.times.10.sup.10 (see col. 2, lines 1-6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device and use the resistivity of Donde with Watanabe since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233.*

As to claim 11, Watanabe discloses an electrostatic chuck, however, he does not disclose the second layer comprising polyimide or Teflon.RTM. Donde teaches in his invention wherein the second layer comprises polyimide (see col. 3, lines 9-11). It would have been obvious to one of ordinary skill in the art at the time the invention was made to

modify the device and add polyimide into the second layer in order reduce leakage of heat transfer fluid between the substrate and the holding surface.

As to claim 20, Watanabe discloses all of the limitation as discussed above, however he does not disclose wherein the first layer comprises a resistivity of from about (5.times.10.sup.9 .OMEGA.cm) to about 8.times.10.sup.10 .OMEGA.cm. Donde teaches in his invention wherein the first layer comprises a resistivity of from about (5.times.10.sup.9 .OMEGA.cm) to about 8.times.10.sup.10 (see col. 2, lines 1-6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device and use the resistivity of Donde with Watanabe since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233.*

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert T. Dang whose telephone number is 571-272-8326. The examiner can normally be reached on M-F, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RTD

KARL EASTHOM
SUPERVISORY PATENT EXAMINER